CLAIMS:

1. A switch mode power supply for feeding a single ended class D amplifier, said power supply comprising two voltage sources (1, 2), the negative side of the first source (1) being connected to the positive side of the second source (2) in a common point (3), characterized by a voltage equalizer circuit including

a coil (10) having a first terminal connected to said common point (3),

a first switch (11) connected between a second terminal of the coil (10) and the positive side of the first source (1),

a second switch (12) connected between said second terminal of the coil (1) and the negative side of the second source (2), and

control circuitry (13, 14) for determining when the voltage (v_1, v_2) of one of the voltage sources (1 or 2) exceeds a first threshold value ($v_{thresh,ON}$), and, in response to such a determination, periodically operate the switch (11 or 12) associated with said one voltage source ON and OFF, thereby redistributing energy from said one voltage source (1 or 2) to the other voltage source (2 or 1).

2. A switch mode power supply according to claim 1, wherein the control circuitry comprises one control circuit (13, 14) for each switch (11, 12), each circuit including

a comparator (15, 16) connected in parallel with the corresponding voltage source (1, 2) for generating an activation signal (19, 20) while the source output voltage (v_1, v_2) exceeds said first threshold value ($v_{thresh,ON}$), and

an oscillator (17, 18) connected to the gate of the switch (11, 12) and receiving said activation signal (19, 20), for providing a periodic gate signal (21, 22) when said activation signal (19, 20) is present.

3. A switch mode power supply according to claim 2, wherein the comparator further is a hysteresis comparator, adapted to inhibit the activation signal when the source output voltage (v_1, v_2) falls below a second threshold value ($v_{thresh,OFF}$).

4. A switch mode power supply according to clam 3, wherein said first threshold value ($V_{thresh,ON}$) is greater than said second threshold value ($V_{thresh,OFF}$).

5. A switch mode power supply according to clam 3 or 4, wherein said first and second threshold values ($V_{thresh,ON}$, $V_{thresh,OFF}$) are greater than the desired source output voltage.

6. A switch mode power supply according to any one of the preceding claims, wherein said switches are MOSFET switches (11, 12).

7. A switch mode power supply according to any one of the preceding claims, wherein said voltage sources are electrolytic capacitors (1, 2).

8. A class D amplifier fed by a switch mode power supply according to any one of the preceding claims.